

Listing of Claims:

1. (currently amended) A kind of yarn of animal collagen fiber, comprising 1-100 WT% of dispersing collagen fibers derived from leathers or/and animal skins, and 0-99 WT% of textile fiber, said collagen fiber and textile fiber being ~~twisted-spun~~ together; -.

in the yarn of animal collagen fiber the collagen fibers appear bunchy and several thinner bunchy collagen fibers, which incorporate other textile fibers or other collagen fibers to form a kind of continuous blended fiber bundles, which are twisted as a blended fibers;

the yarn of animal collagen fiber is able to be woven, for textile products.

2. (original) The yarn of animal collagen fiber according to claim 1, wherein the collagen fiber is derived from at least one kind of animals including cattle, sheep, horses, dogs, pigs, deer, rabbits, crocodiles and snakes.

3. (original) The yarn of animal collagen fiber according to claim 1, wherein the textile fiber is at least one of natural fibers and synthetic fibers including cotton, hemp, wool, silk, terylene, acrylic, nylon, polyamide and viscose staple.

4. (original) A process for manufacturing the yarn of animal collagen fiber of claim 1, comprising the following steps: choosing tanned leather materials, loosing fibers, assorting, blending, carding, drawing and twisting, wherein an opener is used to loose fibers.

5. (original) A process for manufacturing the yarn of animal collagen fiber of claim 1, —the process comprising the following steps: choosing rawhide materials, liming, washing with water, deliming, tanning and softening, dehydrating, loosening fibers, assorting, blending, carding, drawing, and twisting, wherein acid protease is used for deliming, and the pH value in the solution is controlled between 3 and 6.

6. (currently amended) The process of claim 4, Wherein the fibers are loosened by a reciprocating liquid opener, which having a container and at least a beater and, the liquid; in the liquid includes~~opener is~~ water and, at least one substance being added to the water selected from 0.2-2 percent (by weight of water) washing agent, 1-10 percent (by weight of water) lipid or~~and~~ product thereof, 0.2-1.5 percent (by weight of water) penetrating agent and 0.03-0.5 percent~~5 percent~~ (by weight of water) basic substances;~~is~~ added into water in the liquid makes the tanned leather materials expanding; opener, the beater makes to make the adhesive substances of such as fiber matrix among the collagen fibers to become lubricating agent again under repeated beating the tanned leather effect of the liquid and make the materials expanding.

7. (previously presented) The process of claim 4, wherein the loosened dispersing collagen fibers are separated by wind, longer fibers are distributed into a different zone from that of the shorter fibers by the function of airflow, then assorting according to the length of the fibers.

8. (currently amended) The process of claim 4, wherein in the blend step a multi-layer cotton mixing machine is or a method for spreading horizontally and taking directly can be

used to blend for the blending the collagen fibers and textile fibers step.

9. (previously presented) The process of claim 4, wherein in the carding step a carding machine to make the bunchy collagen fibers and textile fibers form continuous fiber assemble with a particular linear density which is homogeneously blended and arrayed orderly in longitudinal direction.

10. (previously presented) The process of claim 4, wherein in the drawing step, a drawing machine is used to draw and level fibers one to three times, each fiber is continuously extended to achieve the object for improving the uniformity of the fibers.

11. (currently amended) The process of claim 4, wherein in the twisting according to diameter and length of the collagen fibers and requirements of spinning yarns select correct~~different~~ roller, abrasion, ring spindle and process for spinning yarns to twist the collagen fibers and textile fibers to form yarns.~~different diameter and length of the yarns.~~

12. (previously presented) The process of claim 5, wherein the liming step uses calcium hydroxide as the primary ingredient, adding 1--3 percent (weight of rawhide) sodium sulfate and 0.1-0.5 percent sodium hydroxide, water is 1.5-2 times that of the rawhide, the temperature for the liming solution is at 30-50 centigrade, and the time for soaking is 2-24 hours.

13. (previously presented) The process of claim 5, wherein for the washing step saponified mixtures are cleaned by ambient water at 30-40 centigrade, followed by washing with ambient water one to two times to make the pH value between 6.5-8.

14. (previously presented) The process of claim 5, wherein for the deliming step, adding 2-3percent (by weight of hide) ammonium sulfate, 0.2-0.5 percent protease and 1-2 times of water, soaking alternated with rolling at pH value between 3 and 6, and at the temperature between 35 and 40 centigrade for 1- 2 hours to removing basic ions in hide and simultaneously further hydrolyze the fiber matrix of rawhide, fat and non-fiber protein, then the impurities are removed with water, for the hide with furs, 3-4 percent (by weight of hide) alkali sulphide including 10-15 percent lime paste , 1-2 percent sodium hydroxide and 1 -2 times of water, is added before liming, the furs are taken off from the hide when dipping for 2-16 hours, and then removed by washing.

15. (currently amended) The process of claim 5, wherein ~~infor~~ the tanning and softening step, method of the chrome tanning method or plant tanning or method and other organic tanning or mineral tanning method in the current technology is performed in the opener to make the hide be reciprocating torn to and fro while tanning, tanned so that the collagen fibers are basically loosened, after tanned, the resulting loosened collagen fibers raw materials are softened by emulsifiable solution and lipid to prevent from cohesion after dehydration.

16. (previously presented) The process of claim 5, wherein a wringing machine is used to make water content between 20-30 percent.

17. (previously presented) The process of claim 5, wherein for the Loosening fibers step using a trapeziform opener or a gill box rotary opener or a cutting machine with three cylinders.